



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/065,176

09/24/2002

Kuo-Kun Tseng

ATCP0011USA

4897

27765

7590

09/14/2006

NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION

P.O. BOX 506

MERRIFIELD, VA 22116

EXAMINER

DING, LEIBO

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/065,176	Applicant(s) TSENG ET AL.	
	Examiner Leibo Ding	Art Unit 2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/08/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because of lack of label in Figure 1, for example, "audible range" should be labeled for 20a, 20c, and 20e; "silent range" should be labeled for 20b and 20d; "sender" should be labeled for 12; "receiver" should be labeled for 14; and "delay" should be labeled for the shaded blocks. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4, 5, 12, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 4 and 12, applicant claims that if the communication mode is half-duplex, the calculated playout delay for current packet depends less on the playout delays of the previous packets than full-duplex; in another word, if the communication mode is full-duplex, the calculated playout delay for current packet depends more on the playout delay of the previous packets than half-duplex. But in the specification, the statement is as below: "More to this point, the full-duplex smoothing factor FF is set larger than the half-duplex smoothing factor HF to provide more rapid adjustment of

Art Unit: 2632

playout delay required by the communications device 30 in full-duplex. This causes the playout delay to depend more on the actual current estimated network jitter and less on the *playout delays of the previous packets or playout history*, thus giving the full-duplex mode relatively quick response" (paragraph [0053] in lines 12 – 17, on page 9 of 19).

The claimed inventions contradict the specification.

Claims 5 and 13 are rejected as the same reason.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1 – 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

With respect to claims 1 and 10, the claimed method and device need to calculate a playout delay for current packet, as specified in Step 106, in which the playout delay is based on **Eqns. 2**. Now let's come back and take a look at eqns.2 in paragraph [0043] on page 8 of 19, these two equations have nothing to do with the whole invention, and

Art Unit: 2632

they are not understandable (First, in Eqns.2, new terms are used without any explanation, for example, NTD₁, TD₁, MAX_TD, DF, DMOS₁, MAX_MOS, and DM, do not know what they stand for; secondly, applicant intends to use Eqns.2 to calculate the playout delay (PD), but PD does not even show up in Eqns.2). The specification does not provide correct and enough description to enable the person skilled in the art to utilize the invention.

Claims 2 – 9 and 11 – 16 are rejected as the dependency from claims 1 and 10.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 – 3, 6 – 11 and 14 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6259677 to Jaswant R. Jain (hereinafter “Jain”) in view of WO 99/13608 to Juha Rapeli (hereinafter “Rapeli”).

With respect to claims 1, 2 and 3, Jain disclose a method for receiving and playing out real-time packetized data (Abstract, lines 1 – 2), including a packet transmission fixed delay estimator and a packet transmission variable delay estimator (Abstract, lines 3 – 4); both work as the network delay estimator in current application to determine the

network delay and network delay variation (jitter), and further estimate the playout delay based on the calculation of the output of two estimators by the playout buffer controller (Abstract, lines 7 – 9, col. 6, lines 6 – 13); and playout buffer controller playout the data in the playout buffer according to the playout delay (col. 5, lines 45 – 47).

Jain does not disclose this method comprises the step of detecting the communication modes (including half-duplex and full duplex). And if the communication mode is detected to be half-duplex, the playout delay is set to be longer than when the communication mode is full-duplex.

Rapeli teaches a method for detecting whether a communication mode is a one-way (half-duplex) or two-way (full-duplex) communication (line 5 in Abstract; lines 3 – 5 on page 4; lines 8 – 12 on page 7); and further derives that longer terminal-to-terminal delay can be applied for a one-way communication mode (lines 6 – 7 in Abstract; lines 32 – 35 on page 10).

It would have been obvious to a person of the ordinary skill in the art at the time the invention was made to add the “communication mode detection method and longer half-duplex delay” as taught by Rapeli to the method for receiving and playing out real-time packetized data of Jain.

Art Unit: 2632

The motivation for doing so would have been to result in a less demand for radio resources and immediate radio transmission, better and more efficient use of the available system resources, and better playout quality (col. 3, lines 22 – 24 of Rapeli).

Therefore, it would have been obvious to combine Rapeli with Jain to obtain the invention as specified in claims 1, 2 and 3.

With respect to claim 6, Jain discloses the playout delay is determined by an equation as below:

$$d_i = \alpha d_{i-1} + (1-\alpha)k_j \quad (1)$$

where k is the gain filter (works as the scaling factor) can be adjusted according to the network condition (col. 7, lines 1 – 9; col. 4, lines 5 – 9).

With respect to claim 7, Jain disclosed the playout delay is determined by an equation as below:

$$d_i = \alpha d_{i-1} + (1-\alpha)k_j \quad (1)$$

where α is the gain factor (works as the smoothing factor) can be adjusted according to the network condition (col. 7, lines 1 – 9; col. 4, lines 5 – 9).

With respect to claim 8, Jain discloses the method is for communication of real-time audio, video, and data signals over a packet-switched data network (col. 1, lines 6 – 11).

With respect to claim 9, Jain discloses the method is for a packet-switched data network (computer network) (col. 1, line 8).

With respect to claims 10 and 11, Jain disclose a receiver for receiving and playing out real-time packetized data (Abstract, lines 1 – 2), including a packet transmission fixed delay estimator and a packet transmission variable delay estimator (Abstract, lines 3 – 4); both work as the network delay estimator in current application to determine the network delay and network delay variation, and further estimate the playout delay based on the calculation of the output of two estimators by the playout buffer controller (Abstract, lines 7 – 9, col. 6, lines 6 – 13); and playout buffer controller playout the data in the playout buffer according to the playout delay to playout device (Figure 5, col. 5, lines 43 – 47, line 60).

Jain does not disclose that the receiver further includes an active detector to detect the communication modes (including half-duplex and full-duplex). And if the communication mode is detected to be half-duplex, the playout delay is set to be longer than when the communication mode is full-duplex.

Rapeli teaches a system for detecting whether a communication mode is a one-way (half-duplex) or two-way (full-duplex) communication (line 5 in Abstract; lines 3 – 5 on page 4; lines 8 – 12 on page 7); and further derives that longer terminal-to-terminal delay can be applied for a one-way communication mode (lines 6 – 7 in Abstract; lines 32 – 35 on page 10).

It would have been obvious to a person of the ordinary skill in the art at the time the invention was made to add the “communication mode detection method and longer half-duplex delay” as taught by Rapeli to the receiver for receiving and playing out real-time packetized data of Jain.

The motivation for doing so would have been to result in a less demand for radio resources and immediate radio transmission, better and more efficient use of the available system resources, and better playout quality (col. 3, lines 22 – 24 of Rapeli).

Therefore, it would have been obvious to combine Rapeli with Jain to obtain the invention as specified in claims 10 and 11.

With respect to claim 14, Jain discloses receiver receives packets from packet data network, store packet data in playout buffer, playout buffer controller computes a

playout time for each packet and releases packets to playout device at their designated playout time (col. 5, lines 42 – 47).

Jain does not disclose the receiver further includes a media input device and a transmitter.

Rapeli teaches the system for detecting whether a communication mode is a one-way (half-duplex) or two-way (full-duplex) communication (line 5 in Abstract; lines 3 – 5 on page 4; lines 8 – 12 on page 7); and further derives that longer terminal-to-terminal delay can be applied for a one-way communication mode (lines 6 – 7 in Abstract; lines 32 – 35 on page 10). The system is coupled to a microphone at input side (lines 12 – 13 on page 6); and an antenna coupled to an antenna duplexer at output side (lines 16 – 17 on page 6, also refer to 21, 26 and 27 in Figure 2, 27 works as transmitter and receiver actually).

It would have been obvious to a person of the ordinary skill in the art at the time the invention was made to add media input device and transmitter as taught by Rapeli to the receiver for receiving and playing out real-time packetized data of Jain.

The motivation for doing so would have been to result in a less demand for radio resources and immediate radio transmission, better and more efficient use of the available system resources, and better playout quality (col. 3, lines 22 – 24 of Rapeli).

Therefore, it would have been obvious to combine Rapeli with Jain to obtain the invention as specified in claim 14.

With respect to claim 15, Jain mentions that speaker is used in VoIP (col. 1, lines 31 – 37) and also playout device 52 is used in application (in Figure 5 of Jain).

With respect to claim 16, Jain discloses the receiver that can employ the present invention is a computer connected to a packet network and either running VoIP software on its microprocessor, or having specialized VoIP hardware or fireware (col. 4, lines 41 – 45).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leibo Ding whose telephone number is (571) 270-1137. The examiner can normally be reached on Monday-Friday, 7:30 a.m.--5:00 p.m., EST.

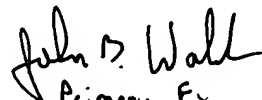
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz F. Jules can be reached on (571) 272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2632

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LD/
August 25, 2006

Frantz F. Jules
Supervisory
Patent Examiner


Primary Ex.
AU 2151